

of it comprises more than five-sixths of the whole surface of the valve and is finely obscurely reticulated by flat, little elevated, broad radii and faint concentric waves; much as in *Cardium peramabilis*. The epidermis rises in thin distant irregular concentric lamellæ.

The most surprising feature of the shell—which, as far as I have been able to discover, is not paralleled in any other species, recent or fossil—is the total absence of lateral teeth. They are not obsolete or obscure, there is simply no trace of them; while the cardinal teeth are well developed and even rather long, and of the normal character. In the right valve the cardinal margin extends backward as a narrow angle or ridge; not elevated, but narrow like the mark on a piece of paper which has been opened after being folded. In front, on the same valve, there is nothing of this; nor on either side of the hinge in the other valve.

On writing to Mr. E. A. Smith of the British Museum, he kindly examined the original (and still unique) type of *C. Cumingi* and reported that it has a hinge identical with our new species.

It is very extraordinary that neither Adams nor Reeve should have noticed this, and no one since has observed it.

The new form which will be called *C. (Lophocardium) Annette*, will be more fully described and figured in the "Report on the *Albatross* Voyage," now in preparation.

It contained the soft parts which resemble those of other *Cardiums* except that the siphonal septum is remarkably prolonged forward, to and around the foot thus separating the mantle-cavity below the visceral mass, into an anal and a branchial chamber. The septum is membranous, thin, and only perforated for the passage of the foot. The gills are large and normal.

It is evident therefore that the section *Lophocardium* will take subgeneric rank in the genus *Cardium*, and be characterized by the absence of lateral teeth, the prolonged siphonal septum, and the prominent radial lamina. Both the species now known are from the west coast of subtropical America, and each represented by a single perfect specimen.

A NEW CALIFORNIAN HELIX.

BY H. A. PILSBRY.

H. (TRIODOPSIS) ROPERI Pilsbry.

Shell broadly umbilicated, flattened, subdiscoidal, resembling in



general form *H. harfordiana* Cooper and *H. polygyrella* Binn. & Bld.; rather thin, opaque, lusterless, reddish-chestnut colored; surface delicately obliquely striate above, smoother beneath, all over beset with short delicate hairs. Spire scarcely perceptibly convex, flat; sutures moderately impressed; apex light-colored; whorls $5\frac{1}{2}$, convex, very slowly widening, the last wider, rounded on the periphery and below; slightly, rather abruptly deflexed at the aperture, constricted immediately behind the peristome. Aperture oblique, lunate-trilobate; peristome well expanded, thickened within, brownish, outer margin bearing a square tubercular tooth within, basal margin bearing a small tubercle near its union with the outer margin; parietal wall with a long slightly curved transverse lamella, its upper termination opposite the superior lip tooth. Umbilicus broad and deep. Alt. 3, diam. maj. 8, min. 7 mill.

Redding, Cal., at the head of the Sacramento Valley.

Three specimens of this species were found in river drift by Mr. E. W. ROPER of Revere, Mass. The shell seems to be intermediate between *H. (Triodopsis) loricata* Gld. and *H. (Polygyrella) harfordiana* J. G. Cooper. It differs from the former in being flatter, much more broadly umbilicated, with different spire and notably different surface sculpture. As to *H. harfordiana* Cooper there seems to be a great deal of confusion in the books; Binney having confounded it with a wholly different species from Idaho. It was described and figured in *Am. Journ. Conch.* v, p. 196, pl. 17, fig. 8. Binney's figure 81, in *Manual Am. Land Sh.*, p. 114, is supposed to represent the type specimen, but is in several respects very incorrect. His description does not belong to this species at all. The form, in fact, belongs with *H. polygyrella*, differing from that species in the more entering, less triangular parietal tooth, absence of internal rows of denticles, and presence of small lip-teeth. It is very similar to *H. polygyrella* in form, texture, shape of aperture, and the peristome, which is not at all reflected or expanded, but is obtuse, thickened within; in this respect differing from both *Triodopsis* and *Polygyra*, which have expanded peristomes. Only two specimens of *Polygyrella harfordiana* have been found. *H. harfordiana* Cooper must not be confounded with *H. (Triodopsis) harfordiana* W. G. B.; this name being preoccupied, Mr. Tryon very properly changed it to *H. salmonensis*.

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